

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Previously Presented) The nucleic acid molecule of claim 11, where the nucleic acid molecule is purified from a mammal.
3. (Canceled)
4. (Canceled)
5. (Previously Presented) A nucleic acid vector comprising the nucleic acid probe of claim 36 and a promoter effective to initiate transcription in a host cell.
6. (Previously Presented) A recombinant cell or tissue comprising the nucleic acid probe of claim 36.
- 7-10. (Canceled)
11. (Previously Presented) An isolated, enriched, or purified nucleic acid molecule comprising a nucleotide sequence that:
 - (a) encodes a Fibroblast Growth Factor Receptor Protein Kinase Substrate 2 (FRS2) polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1; or
 - (b) is the complement of the nucleic acid sequence of (a).
12. (Previously Presented) A nucleic acid vector comprising a nucleic acid molecule of claim 11.

13. (Previously Presented) A recombinant cell or tissue comprising a nucleic acid molecule of claim 11.

14.-19. (Canceled)

20. (Previously Presented) The nucleic acid molecule of claim 11, wherein said nucleic acid molecule is fused to a nucleic acid molecule encoding a second protein.

21. (Previously Presented) The nucleic acid molecule of claim 20, wherein said second protein is selected from the group consisting of hemagglutinin, GST, maltose binding-protein, or a fragment of any one of said second proteins.

22. (Canceled)

23. (Previously Presented) The nucleic acid molecule of claim 20, wherein said nucleic acid molecule encodes a FRS2 polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1.

24 – 29 (Canceled)

30. (Presently Amended) An isolated, enriched, or purified nucleic acid molecule that encodes a Fibroblast Growth Factor Receptor Protein Kinase Substrate 2 (FRS2) polypeptide, wherein said nucleic acid molecule is selected from the group consisting of:

(a) a ~~nucleotide~~ nucleic acid molecule that encodes a FRS2 polypeptide, wherein said FRS2 polypeptide consists of the full length amino acid sequence set forth in SEQ ID NO: 1 except that it lacks at least one, but not all, of the following segments of amino acid residues: 1-10, 11-152, or 153-508;

~~(b) is the complement of the nucleic acid sequence of (a);~~

(e ~~b~~) a ~~nucleotide~~ nucleic acid molecule that encodes a FRS2 polypeptide, wherein said FRS2 polypeptide consists of the full length amino acid sequence set forth of SEQ ID NO: 1 except that it lacks at least one, but not all of the domains selected from the group

consisting of a myristylation region, a phosphotyrosine binding region, and a C-terminal region;

~~(d) is the complement of the nucleic acid sequence of (c);~~

(e ~~c~~) a nucleic acid molecule that has at least 90% sequence identity to the FRS2 polypeptide set forth in SEQ ID NO: 1;

~~(f) is the complement of the nucleic acid sequence of (c);~~

(g ~~d~~) a nucleic acid molecule that encodes a FRS2 polypeptide, wherein said FRS2 polypeptide consists of amino acid residues 1-10, 11-152, or 153-508 of SEQ ID NO: 1;

(e) a nucleic acid molecule that encodes a FRS2 polypeptide, wherein said FRS2 polypeptide lacks one or more, but not all, of the segments of amino acid residues selected from the group consisting of 1-10, 11-152, or 153-508 of SEQ ID NO: 1;

~~(h) is the complement of the nucleic acid sequence of (g);~~

(i ~~f~~) a nucleic acid molecule that encodes

(1) a FRS2 polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1 ~~of a FRS2 polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1; and~~

~~(2) a nucleic acid molecule of (a);~~

(3 ~~g~~) a nucleic acid molecule of ~~(f), wherein each of (1), (2), or (3) (d), (e), or (f) wherein said FRS2 polypeptide~~ contains one or both of the following mutations: tyrosine 349 to phenylalanine or tyrosine 392 to phenylalanine; ~~and~~

~~(j) is the complement of the nucleic acid sequence of (i);~~

wherein said FRS2 polypeptide encoded by the nucleic acid molecule of binds to Grb-

2.

31. (Previously Presented) A nucleic acid vector comprising the nucleic acid molecule of claim 30.

32. (Previously Presented) The nucleic acid vector of claim 31, further comprising a promoter effective to initiate transcription in a host cell.

33. (Previously Presented) A recombinant cell or tissue comprising the nucleic acid molecule of claim 30.

34. (Previously Presented) The nucleic acid molecule of claim 30, wherein said nucleic acid molecule is fused to a nucleic acid molecule encoding a second protein.

35. (Previously Presented) The nucleic acid molecule of claim 34, wherein said second protein is selected from the group consisting of hemagglutinin, GST, maltose binding-protein, or a fragment of any one of said second proteins.

36. (Presently Amended) A nucleic acid probe for the detection of nucleic acid molecules encoding a Fibroblast Growth Factor Receptor Protein Kinase Substrate 2 (FRS2) polypeptide ~~comprising~~ consisting of a nucleic acid molecule that encodes an amino acid sequence consisting of a fragment of SEQ ID NO: 1 ~~comprising~~ consisting of at least 10 contiguous amino acids or the complement thereof.

37. (Presently Amended) The nucleic acid probe of claim 36, wherein said fragment ~~comprises~~ consists of at least 15, 20, 25, 30, 35, 40, 50, 100, 200, 300, 500, or 508 contiguous amino acids or the complement thereof.

38. (Previously Presented) A nucleic acid vector comprising the nucleic acid probe of claim 37 and a promoter effective to initiate transcription in a host cell.

39. (Previously Presented) A recombinant cell or tissue comprising the nucleic acid probe of claim 37.